



## **Anthrax Fact Sheet**

**1. What is Anthrax?** - Anthrax is an acute infectious disease caused by the spore-forming bacterium *Bacillus anthracis*. A spore is a cell that is dormant (asleep) but may come to life with the right conditions. Anthrax most commonly occurs in wild and domestic livestock (cattle, sheep, goats) in the United States, but infections can occur in humans as well. In the fall of 2001, an outbreak of cutaneous (skin) and inhalational (respiratory) Anthrax in 22 persons occurred in New York City, New Jersey, Washington, D.C. and Florida as a result of bioterrorism involving mailed letters intentionally contaminated with Anthrax spores. Anthrax is considered a leading bioterrorism threat agent because of its high lethality and ease of aerosol dispersion of the spores.

**2. How is Anthrax spread?** - Anthrax can be spread three ways:

a. Through skin contact with Anthrax spores, naturally from infected animal products including hair, wool, or hides, or from intentionally contaminated letters, as occurred in Fall 2001. This route of exposure usually produces the cutaneous form of Anthrax.

b. Through inhaling Anthrax spores, naturally from exposure to industrial processes like tanning hides and processing wool where aerosols of Anthrax spores may be produced, or through intentional aerosol release from contaminated letters, as occurred in Fall 2001. This produces inhalational Anthrax, which is highly lethal.

c. Through eating contaminated, undercooked meat containing Anthrax spores. Anthrax is not spread through animal milk. This route of exposure usually produces gastrointestinal Anthrax.

**2. What are the different types of diseases of Anthrax?**

a. Cutaneous Anthrax is marked by a boil-like lesion that typically forms an ulcer with a black center. Cutaneous Anthrax infections account for about 95% of all human Anthrax cases, and usually respond well to prompt antibiotic treatment. Deaths are extremely rare, as long as patients are treated promptly with antibiotics.

b. The initial symptoms of inhalational Anthrax resemble the "flu" and include fever, muscle ache, mild cough, and chest pain. After several days, the symptoms may progress to severe breathing problems and shock. Without immediate treatment, inhalational Anthrax is usually fatal.

c. Intestinal Anthrax is the rarest form of the disease. There has never been a documented case of intestinal Anthrax in the United States. The intestinal form of Anthrax may follow the consumption of undercooked, contaminated meat and is characterized by an acute inflammation of the intestinal tract. Initial symptoms of intestinal Anthrax include: nausea, loss of appetite, vomiting, and fever. These symptoms are followed by abdominal pain, vomiting of blood and severe diarrhea, which can be bloody. Unless antibiotic treatment is started soon after the onset of symptoms, intestinal Anthrax is usually fatal.

**3. Who gets Anthrax?** - Anthrax is most common in agricultural regions of the world where Anthrax in animals often occurs. Anthrax occasionally occurs in animal herds in the United States as well, but until

2001, cases in humans in the United States were rare. A case of inhalational Anthrax in an individual who made his own drums with imported hides from Africa was diagnosed in Pennsylvania in 2006.

**4. How soon after Anthrax infection do symptoms appear?** - Generally, the incubation period is seven days or less. Most cases of Anthrax occur within 48 hours of exposure. However, although less common, inhalational Anthrax can develop more than six weeks after exposure to inhaled Anthrax spores.

**5. Is Anthrax contagious?** – Inhalational Anthrax is not spread from person to person. Even after the development of symptoms of inhalational Anthrax, persons are not contagious to others. With Cutaneous (skin) Anthrax, the drainage from an open sore presents a very low risk of infection. Anthrax is not spread from person to person by casual contact, sharing office space, or by coughing or sneezing.

**6. How is Anthrax infection diagnosed?** - Anthrax is diagnosed by culturing the bacteria from blood, skin lesions, or respiratory secretions. Special confirmatory testing of suspicious bacteria is then done at governmental public health reference laboratories.

**7. What is the treatment for Anthrax?** - Doctors prescribe antibiotics to treat Anthrax. To be effective, treatment should be started as soon as possible after Anthrax infection is suspected.

**8. Is there an Anthrax vaccine?** – There is a vaccine to prevent Anthrax, but it is not available for the general public. This vaccine requires six shots over an 18-month period with periodic boosters.

**9. For more information about Anthrax:** <http://emergency.cdc.gov/agent/anthrax/index.asp>

This fact sheet provides general information. Please contact your physician for specific clinical information related to you.

February 23, 2011